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STATE OF ILLINOIS
POLLUTION CONTROL BOARD
309 WEST WASHINGTON STREET
CHICAGO, ILLINOIS 60606
ENVIRONMENTAL PROTECTION AGENCY
STATE OF ILLINOIS

EPA Region 5 Records Ctr.



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[DAVID P. CURRIE, CHAIRMAN]
DONALD A. HENSS
JACOB D. DUMELLE
[JOHN L. PARKER]
SAMUEL T. LAWTON, JR., ACTING CHAIRMAN
ROGER G. SEAMAN

May 7, 1973

Mr. Patrick O. Boyle, Legal Counsel)	PCB73-87
Olin Corporation)	
Energy Systems Operations)	OLIN CORPORATION
East Alton, Illinois 62024)	
)	v.
Ms. Nancy Schaffenacker)	
Environmental Protection Agency)	ENVIRONMENTAL PROTECTION AGENCY
2200 Churchill Road)	
Springfield, Illinois 62706)	

Dear Sirs:

Enclosed please find certified copies of the Opinion and Order of the Board adopted May 3, 1973 for the above entitled matter.

Very truly yours,

Christan L. Moffett
Clerk for the Board

CLM
enc.

- cc:
- H. Sheldon
 - L. Eaton
 - T. Immel
 - R. Goldberg
 - J. Anderson
 - C. Clark
 - L. Hudson

ILLINOIS POLLUTION CONTROL BOARD
May 3, 1973

OLIN CORPORATION,)	
)	
Petitioner,)	
)	
v.)	PCB 73-87
)	
ENVIRONMENTAL PROTECTION AGENCY,)	
)	
Respondent.)	

OPINION AND ORDER OF THE BOARD (by Mr. Seaman):

Petitioner operates a facility in Marion, Williamson County, for the manufacture of various propellant and pyrotechnic devices sold mainly to the U. S. Department of Defense. The subject of this petition for variance is the open burning of explosive waste of a new product Petitioner plans to introduce to its Williamson County facility. This product will be the assembly or "load and pack" of intermediate caliber ammunition, including high explosive incendiary ammunition for military use. Petitioner plans to install the capacity to assemble 11,000 rounds of ammunition per eight-hour work shift. Petitioner indicates that it will generate 15.7 pounds of high explosive RDX slurry type scrap per shift.

Petitioner alleges that there is no known method of safe disposal of this waste except by open burning. RDX possesses such a high energy of detonation as to make burning it in a closed vessel extremely hazardous. However, Petitioner does state that it will investigate other feasible alternatives to open burning during the period of the variance.

No data is available to Petitioner concerning the actual products of combustion of RDX. However, if sufficient oxygen were present to allow complete combustion, the theoretical products of combustion of 15.7 pounds of this scrap are alleged to be:

Carbon dioxide	6.8 lbs.
Water	2.5 lbs.
NO _x (as NO ₂)	12.4 lbs.
Aluminum oxide	9.8 lbs.

The Agency agrees with Petitioner's estimates.

In its Recommendation, the Agency states that the explosive RDX waste is at all times kept completely submerged in water to prevent explosion; that the material cannot be transported over great distances because of its explosive nature; and that the open burning site is in a remote abandoned strip mine. This is the same site where Petitioner open burns pyrotechnic waste under a variance granted by the Pollution Control Board. The Agency has received no complaints from the public as a result of Petitioner's past open burning practices.

Petitioner is unable to estimate the cost of compliance since no method of compliance is presently known. Petitioner is further unable to state what injury, if any, would be caused by open burning of the scrap here involved. However, Petitioner alleges that open burning of small quantities of RDX scrap in other states has not caused any noticeable damage or caused any complaints to Petitioner.

Olin Corporation believes that the denial of a variance under this petition would impose an arbitrary and unreasonable hardship. Petitioner knows of no safe means other than open burning to dispose of the explosive scrap here involved. This material becomes less stable with age, and storage would merely increase a fire and explosive hazard. The inability to dispose of this scrap would require Petitioner, for safety reasons, to stop production of the item generating the scrap.

In view of the relatively small amount of waste under consideration, the current lack of technically feasible alternatives to open burning and Petitioner's pledge to pursue and implement methods to achieve compliance, this Board is disposed to allow the variance requested, subject to certain conditions.

This opinion constitutes the findings of fact and conclusions of law of the Board.

IT IS THE ORDER of the Pollution Control Board that a variance be granted to Olin Corporation as requested for a period of one year from the date of this opinion subject to the following conditions:

- (a) Petitioner shall limit the amount of material to be open burned to that amount stated by Petitioner in its variance request.
- (b) Whenever possible, Petitioner shall limit its open burning to such times when atmospheric conditions will readily dissipate any contaminants.

(c) Within 30 days of the date of this Order, Petitioner shall submit in writing a progress report to the Agency. Said report shall contain:

- 1) Any complaints received by Olin concerning the open burning of the RDX;
- 2) Progress made toward implementing a program of eliminating the open burning of the RDX;

said reports shall continue monthly during the term of this variance.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, certify that the above Opinion and Order was adopted by the Board on the 3rd day of March, 1973, by a vote of 4 to 0.

03-1-36



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STATE OF ILLINOIS
POLLUTION CONTROL BOARD

309 WEST WASHINGTON STREET SUITE 300

Roger G. Seaman
DONALD A. HENS
JACOB D. DUMELLE

CHICAGO, ILLINOIS 60606

TELEPHONE
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SAMUEL T. LAWTON, JR., Acting Chairman

March 22, 1973

Mr. Patrick O. Boyle
Legal Counsel
Olin Corporation
Energy Systems Operations
East Alton, Illinois 62024

PCB72-517

OLIN CORPORATION

Mr. Arthur Rosenblum
Suite 2010
69 W. Washington Street
Chicago, Illinois 60602

v.

ENVIRONMENTAL PROTECTION AGENCY

Ms. Nancy Schaffenacker
Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

Dear Sirs:

Enclosed please find certified copies of the Opinion and Order of the Board adopted March 22, 1973 for the above entitled matter.

Very truly yours,

Christan L. Moffett
Clerk of the Board

CLM:gn
enc.

cc: H. Sheldon
L. Eaton
T. Immel
R. Goldberg
J. Anderson
L. Hudson
B. Pye

ILLINOIS POLLUTION CONTROL BOARD
March 22, 1973.

OLIN CORPORATION,
a Virginia Corporation

v.

ENVIRONMENTAL PROTECTION AGENCY

)
)
) #72-517
)
)
)

OPINION AND ORDER OF THE BOARD (BY SAMUEL T. LAWTON, JR.):

On October 31, 1972, in Case #72-517, we granted an order extending the variance previously granted in #71-60 and subsequently extended in #71-371 to March 31, 1973. The variance authorized Olin Corporation to burn in the open certain explosive waste generated in its manufacture of military flares, missiles, rocket igniters and jet aircraft starter cartridges at its Williamson County facility.

The present petition seeks an extension from the March 31, 1973 date to March 31, 1974. All of the foregoing variance allowances were in contemplation of petitioner developing a novel experimental-type incinerator for disposal of the scrap generated. Applications have been made to the Agency to authorize operation of this facility.

On March 3, 1972, a permit was granted to Olin to open burn in an experimental incinerator, as defined in the plans and specifications submitted on February 23, 1972. The permit was subject to certain specified conditions and expired on March 3, 1973. Initial runs of the experimental incinerator resulted in excessive amounts of washer water being blown out of the stack, which conditions Olin anticipates will be corrected by changes in the drainage piping. Olin represents that it will need the additional year in order to perfect the incinerator and that in the meantime, it will be burning explosive scrap in an abandoned strip mine area, which burning will not produce any adverse impact on adjacent properties.

Disposal of explosive wastes by open burning at the present time appears to be the only safe method of disposal, pending development of more sophisticated incineration processes, which are still in the experimental stage.

The Agency has recommended that the variance be granted only until July 1, 1973, or until the incinerator is operational, and the petitioner has obtained permits from the Agency, which even if sooner, subject to conditions of reporting, observation of burning by Agency personnel, the submission of monthly reports detailing progress

Open hearings on this disposal problem have been held at East St. Louis on September 10, 1969 under VR 67-60, and at Marion, Illinois on May 21, 1971 and November 14, 1973.

4. In accordance with the terms of its prior variances, Petitioner has designed and built an incinerator for the disposal of its explosive wastes. Attached hereto as exhibit "A" and made a part hereof is a copy of Petitioner's application for incinerator construction and operating permit filed with the Illinois Environmental Protection Agency on January 21, 1974, pursuant to Variance Number PCB 73-395.

Petitioner's tests and conclusions relating to the quantity and types of contaminants discharged from its incinerator are set forth in Attachment "A".

5. Petitioner submits that the existing emission standards for incinerators are based upon present technology for burning municipal type solid waste. An incinerator to burn explosives represents an advance in the state of the art which is not covered by present emission standards.

Attached hereto as exhibit "B" is a Petition to Amend Regulations which Petitioner has filed simultaneously with this Petition for Variance.

Petitioner believes that compliance with existing emission standards for incinerators would impose an arbitrary and unreasonable hardship for the reasons set out in Attachment "B".

6. Petitioner does not believe that a grant of this variance would impose any injury on the public or prevent compliance with national air quality standards.

Petitioner's incinerator is constructed in a remote area on strip mine spoil land owned by Petitioner in Township 9 South, Range 2 East of the Third Principal Meridian in Williamson County, Illinois described as follows:

SW $\frac{1}{4}$, section 3, less N $\frac{1}{2}$ of NW $\frac{1}{4}$ of SW $\frac{1}{4}$, section 3, and less N $\frac{1}{2}$ of NE $\frac{1}{4}$ of SW $\frac{1}{4}$, section 3. S $\frac{1}{2}$ of NW $\frac{1}{4}$ of SE $\frac{1}{4}$, section 3, SW $\frac{1}{4}$ of SE $\frac{1}{4}$, section 3.

W $\frac{1}{2}$ of S $\frac{1}{2}$ of NE $\frac{1}{4}$ of SE $\frac{1}{4}$, section 3.

W $\frac{1}{2}$ of SE $\frac{1}{4}$ of SE $\frac{1}{4}$, section 3.

N $\frac{1}{2}$ of N $\frac{1}{2}$ of NW $\frac{1}{4}$, section 10.

N $\frac{1}{2}$ of NW $\frac{1}{4}$ of NE $\frac{1}{4}$, section 10.

N $\frac{1}{2}$ of NE $\frac{1}{4}$ of NE $\frac{1}{4}$, section 10.

being approximately 290 acres of spoil lands from strip mining operations conducted in the past.

Attached hereto as Attachment "C" is a copy of a Geological Survey Map showing the approximate location of the incinerator and its relationship to the surrounding area.

The Environmental Protection Agency at part 11 of its recommendation under PCB 73-395 stated that particulate concentrations in the area of this incinerator are 32 micrograms per cubic meter (annual geometric mean) and 64 micrograms per cubic meter (maximum 24 hour average).

This Board in its opinion noted that the particulate concentrations given

are well below the primary and secondary national air quality standards for particulates set forth at 40 C.F.R. 50.6 and 50.7.

Primary air quality standards for particulate matter is 75 micrograms per cubic meter (annual geometric mean) and 260 micrograms per cubic meter (maximum 24 hour concentration).

The Agency calculated particulate emissions from this incinerator at 1.24 pounds per hour. Petitioner estimates that 16 hours per week of operation at a firing rate not to exceed 500 lbs. per hour of explosive wastes will be sufficient for its needs. Petitioner submits that such level of particulate emissions will cause no harm and that the area will remain well below national air quality standards for particulates.

Carbon monoxide emissions from burning certain wastes can reach a level of 10.5 lbs. per hour from Petitioner's incinerator. Petitioner submits that on an annual basis this incinerator will generate approximately the same amount of carbon monoxide as an automobile driven 7,000 miles at 35 m.p.h. Petitioner submits that this possible level of carbon monoxide generation will cause no harm and will not cause the area to exceed national air quality standards for carbon monoxide.

WHEREFORE, Olin Corporation prays the Board to grant it a variance permitting it to burn explosive wastes in its incinerator under such terms and conditions as are appropriate for one year by granting relief from the following air pollution control regulations of the State of Illinois:

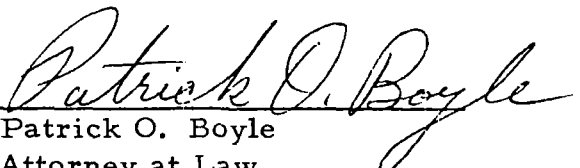
Rule 104: Compliance Programs and Project Completion Schedules -
Petitioner seeks relief from this rule during such time as the Board
considers its Petition to Amend Regulations which is set forth as
Attachment "B" hereof.

Rule 203(e): Particulate Emission Standards and Limitations for
Incinerators, and

Rule 206(b) Carbon Monoxide Emission Standards and Limitations
for Incinerators.

Respectfully submitted,

OLIN CORPORATION

by 
Patrick O. Boyle
Attorney at Law
East Alton, Illinois 62024
Phone: 618- 258-2603